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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/742,625	12/20/2000	Frank Bor-Her Chen	25164-67462	9358
28863	7590	07/26/2005	EXAMINER	
SHUMAKER & SIEFFERT, P. A. 8425 SEASONS PARKWAY SUITE 105 ST. PAUL, MN 55125			CLEVELAND, MICHAEL B	
			ART UNIT	PAPER NUMBER
			1762	

DATE MAILED: 07/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/742,625	<b>Applicant(s)</b> CHEN ET AL.	
	<b>Examiner</b> Michael Cleveland	<b>Art Unit</b> 1762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 09 May 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 37-62 is/are pending in the application.
- 4a) Of the above claim(s) 55-62 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 37-54 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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## DETAILED ACTION

### *Election/Restrictions*

1. Applicant elected claims 37-54 by original presentation. The reply filed on 5/9/2005 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).
2. Claims 55-62 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse by original presentation. Applicant states on p. 6 of the response that claims 55-62 are canceled. However, this statement does not agree with the submitted claims, which list claims 55-62 as "withdrawn", nor with the first sentence on p. 6.

### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 37-40, 42, and 49-50 are rejected under 35 U.S.C. 102(b) as being anticipated by van der Hoeven (U.S. Patent 4,789,604, hereafter '604).

Claims 37, 40: '604 teaches forming a crosslinkable polymer coating on paper (a compressible mat), crosslinking it at room temperature (i.e., without heating) (col. 9, lines 43-62) and

compressing and heating the crosslinked coating and the mat to form the polymer coated substrate (col. 9, line 63-col. 10, line 4).

The composition is crosslinked at station 4 at the same time (i.e., when) it is applied at station 11.

Claims 38-39: The substrate for the coating may be a wood panel, or a wood panel with paper attached to it (col. 6, lines 25-54). (In such embodiment, the polymerizable coating is

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placed on the paper (col. 6, lines 30-32). Adjacent layers may be attached by glue (col. 3, line 50-col. 4, line 5).

Claim 42: There is no indication that ions are present in the radiation-crosslinkable compositions. Therefore, they appear to be covalently cross-linked.

Claims 49-50: '604 teaches that a top, release coating (3) may be applied to the polymer before compressing and heating (col. 9, lines 20-62).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 37-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over van der Hoeven '604 in view of Helmer et al. (WO 96/22338, hereafter '338).

Claims 37, 40-41, 43-44, and 47-48: '604 teaches forming a crosslinkable polymer coating on paper (a compressible mat), crosslinking it at room temperature (i.e., without heating) (col. 9, lines 43-62) and

compressing and heating the crosslinked coating and the mat to form the polymer coated substrate (col. 9, line 63-col. 10, line 4).

The composition is crosslinked at station 4 at the same time (i.e., concomitant) as it is applied at station 11.

'604 teaches the use of crosslinking acrylate polymers (col. 5, lines 1-62) to provide decorative coatings. It does not explicitly teach the use of ionically crosslinked polymers that cross-link at the point of application.

'338 teaches the formation of a quick drying paint (i.e., a decorative coating) comprising crosslinking acrylate polymers (pp. 3, 7). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used these polymers in place of those of '604 in order to have achieved faster curing with a reasonable expectation of success because they are

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decorative crosslinkable acrylate polymers disclosed as having the advantage of hardening quickly. Applicant states that these polymers are ionically crosslinked, thermosetting polymers, and that they crosslink as they are being applied (i.e., concomitant with application).

Claims 38-39, 45-46: '604 teaches that the substrate for the coating may be a wood panel, or a wood panel with paper attached to it (col. 6, lines 25-54). (In such embodiment, the polymerizable coating is placed on the paper (col. 6, lines 30-32). Adjacent layers may be attached by glue (col. 3, line 50-col. 4, line 5).

Claim 42: '604 contains no indication that ions are present in the radiation-crosslinkable compositions. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used covalently cross-linking polymers, particularly in view of Applicant's disclosure that fast cross-linking covalent cross-linking polymers are known.

Claims 49-50 and 53-54: '604 teaches that a top, release coating (3) may be applied to the polymer before compressing and heating (col. 9, lines 20-62).

Claims 51-52: '338 teaches that the solids content may be 40-70 % (p. 14, lines 29-36).

### ***Response to Arguments***

7. Applicant's arguments filed 5/9/2005 have been fully considered but they are not persuasive.

Applicant argues that the presently claimed process does not require any extra processing or heating/drying steps to cure the material. The argument is unconvincing because it is not commensurate in scope with the claims, which do not exclude such extra steps. Furthermore, it is unconvincing because '338 teaches such processes.

Applicant argues that there is no motivation to use the material of Helmer '338 as the liquid of van der Hoeven because van der Hoeven wishes its liquid to conform to the substrate. The argument is unconvincing because Helmer '338 teaches that its material is applied as a liquid and crosslinks as it contacts the substrate.

van der Hoeven teaches the use of decorative crosslinking acrylate polymers. '338 indicates that its polymers are suitable decorative crosslinking acrylate polymers. Thus, their suitability for the purpose of '604 renders their use obvious. Furthermore, '338 teaches the

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advantage that its polymer cures quickly. Faster curing is well recognized in the art of curing resins to create greater productivity. (See the references cited below, particularly Motter).

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

### *Conclusion*

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Motter et al. (U.S. Patent 5,635,583, col. 2, lines 31-40), Moschovis et al. (U.S. Patent 4,782,129, col. 6, lines 10-25), Traver et al. (U.S. Patent 4,190,688, col. 2, lines 1-9), and Josten et al. (U.S. Patent 4,125,497, col. 2, lines 3-13) are cited as evidence that faster curing resins are recognized in the art of curing resins as advantageous.

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

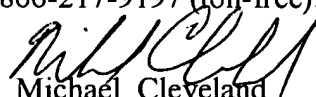
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Cleveland whose telephone number is (571) 272-1418. The examiner can normally be reached on Monday-Thursday, 7-5:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Michael Cleveland  
Primary Examiner  
Art Unit 1762

7/22/2005